



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,848	05/12/2006	Blaise Rouleau	1200.744	2992
7590 Longacre & White 6550 Rock Spring Drive Suite 240 Bethesda, MD 20817			EXAMINER DESAL, NAISHADH N	
			ART UNIT 2834	PAPER NUMBER
			MAIL DATE 07/18/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,848

Applicant(s)

ROULEAU ET AL.

Examiner

NAISHADH N. DESAI

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1 DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1- 6,10-12,14-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (US 7168923) in view of Yamada (US 5616974)

1. Regarding claim 1, Vasilescu et al teaches:

A fan for an alternator-starter, fixed on a rotor, with magnetic poles, of the alternator-starter, the fan comprising (abstract of Vasilescu et al):

- a metallic insert adapted to be fixed on the rotor (abstract), and
- a radial web and at least one fan blade, which are moulded in plastics material on the metallic insert (abstract of Vasilescu et al),

Vasilescu et al do not teach "a magnetic target which is fixed directly onto one of said metallic insert, said radial web and said fan blade to rotate therewith, whereby said

magnetic target in association with at least one sensor, ensures magnetic following of the rotation of the rotor”

Yamada teaches the use of a magnetic target located on the fan blade (Fig 1,4A-C) and sensor (Fig 1,7) by using a magnetic circuit to detect rotation of the rotor (Fig 1,5). It is well known in the art to use sensors to detect movement or position of elements. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Vasilescu et al to have the rotor positioning devices as taught by Yamada and mold them in a single plastic piece. The motivation to do so would be that it would allow for detection of an angular position of a rotor, and eliminate damage caused by counter electromotive force of the filed magnetic coil (abstract of Yamada).

It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

2. Regarding claim 2, that the magnetic target is moulded in situ on the metallic insert. The method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985). In this instance it is obvious that molding

the magnetic target in situ on the metallic insert can be done together, as Vasilescu et al teaches molding of different parts (abstract).

3. Regarding claim 3, Yamada (Col 3 ll 57-60) teaches that the magnetic target is fastened to the blades. Yamada does not explicitly teach that it is fastened by using an adhesive. This is a method of making limitation. The method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985).

4. Regarding claims 4-6, Vasilescu et al and Yamada teaches mounting of a magnetic target on a fan blade except for mounting it in various locations (such as on a tubular portion of the metallic insert or internal / external wall of the tubular portion). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the magnetic target on a tubular portion of the metallic insert or the internal or external walls thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

5. Regarding independent claim 10, Vasilescu et al teaches:

A fan for an alternator-starter, fixed on a rotor with magnetic poles of the alternator-starter fixed on a rotor with magnetic poles of the alternator-starter, the fan comprising (abstract):

 a metallic insert adapted to be fixed on the rotor (abstract), and
 a radial web and at least one fan blade, which are moulded in plastics material on the metallic insert (abstract and Fig 11),

Vasilescu et al do not teach "a magnetic target which, in association with at least one sensor, ensures magnetic following of the rotation of the rotor",

Yamada teaches "a magnetic target with a sensor which ensures magnetic following of the rotor (abstract and (Fig 1,4A-C,5,7), and a crown element of plastics material constituting a shroud ring (Fig 1,3C), with at least some of the blades of the fan extending from the web to the crown element (Fig 1), said crown element formed to direct an air stream radially toward the center of the radial web (Fig 1,3C,abstract and Col 4 ll 28-35). It is well known in the art to use sensors to detect movement or position of elements. It is also well known to use shroud rings to direct or re-direct air flow in the desired direction/location. In this instant case, it is obvious that the shroud rings of Yamada can be used to deflect air radially inwards or in any desired direction by changing its form or shape. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Vasilescu et al to have the rotor positioning devices as taught by Yamada and mold them in a single plastic piece. The motivation to do so would be that it would allow for detection of an

angular position of a rotor, and eliminate damage caused by counter electromotive force of the field magnetic coil (abstract of Yamada).

It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Vasilescu et al and Yamada discloses the claimed invention except for the shroud ring to be in a shape or form to allow the air to be deflected radially inwards. It would have been an obvious matter of design choice to change the shape of the shroud ring to allow air to be deflect radially inward, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

6. Regarding claims 11,12 and 20, Vasilescu et al and Yamada disclose the claimed invention except for mounting the magnetic target in various locations (such as against inner circumference of cover / on the cover / facing away from the radial web). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the magnetic target on the cover or inner circumference thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

7. Regarding claim 14, Vasilescu et al teaches that the blades are of complex form (Fig 5).

8. Regarding claims 15 and 16, Vasilescu et al teaches that the fan blades are spaced apart over at least two stages (Col 7 ll 4-6 and Figs 6-8).

9. Regarding claims 18 and 19, Vasilescu et al and Yamada teaches mounting of a magnetic target on a fan blade except for mounting it in various locations (such as on a tubular portion of the metallic insert or internal / external wall of the tubular portion). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the magnetic target on a tubular portion of the metallic insert or the internal or external walls thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

Claims 7-9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (US 7168923) and Yamada (US 5616974) in view of Lopatinsky (US 6194798)

10. Regarding claim 7, Lopatinsky teaches that the magnetic target comprises a magnetic material combined with the plastics material of the web and/or fan blades (abstract).

Vasilescu et al and Yamada disclose the claimed invention except for explicitly mentioning that the magnetic target is made of combination of magnetic material and plastic. Lopatinsky teaches the use of molding plastic with other elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made

to make the magnetic target of a combination of magnetic material and plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. The motivation to combine the magnetic material with plastic would be to reduce weight and cost of the device.

11. Regarding claim 8, Lopatinsky teaches that the magnetic material of the target comprises ferrites or rare earths (abstract).

12. Regarding claim 9, Lopatinsky teaches that the magnetic material of the target is a magnetic plastic material (abstract).

13. Regarding claim 17, Lopatinsky teaches that one group of blades is of plastics material moulded in situ on the metallic insert (abstract), and in that the remainder of the blades are of metal projecting integrally from the metallic insert.

Lopatinsky discloses the claimed invention except for explicitly mentioning that the remainder of the blades are made of metal projecting integrally from the metallic insert. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fan blades of a combination of metal and plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design

choice. *In re Leshin*, 125 USPQ 416. The motivation to combine metal with plastic would be to reduce weight and cost of the device.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (US 7168923) and Yamada (US 2003/0042813) further in view of Gold (US 4588911)

14. Regarding claim 13 Gold teaches that the fan constitutes a powder pot for the connecting wires of the rotor (Col 2 ll 40-53).

Vasilescu et al teaches the device as claimed. Vasilescu et al do not teach the use of a magnetic target and sensor. Yamada teaches the use of a target and sensor. Yamada do not teach the use of an epoxy resin to attach the rotor wires. Gold teaches the use of epoxy resin [Col 2 ll 40-53]. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to use the epoxy resin disclosed by Gold to attach the rotor wires of Vasilescu et al and Yamada's device. The motivation to do so would be that it would secure the wires and provide proper orientation and interconnection between parts (Col 1 ll 33-39 of Gold).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

Response to Arguments

16. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. According to § 2111 of the MPEP, claims must be given their broadest reasonable interpretation. A portion of this section is cited below for the practitioner's convenience:

During patent examination, the pending claims must be "given *their< broadest reasonable interpretation consistent with the specification." >*In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).< Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naishadh N. Desai whose telephone number is (571) 270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/17/08

Naishadh N Desai
Patent Examiner

/Dang D Le/
Primary Examiner, Art Unit 2834